CC1 Subset for Orlando Demonstration
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11/29/04

Due to time constraints, the use of AP238 CC1 for the February 2004 OMAC portability demonstrations has been limited. These limitations simplify the task of creating the AP238 to CNC converters. The limitations will hopefully reduce the possibility of failure due to "trivial" variances, such and unit conversions, etc.

Obviously, these "trivial" issues quickly become non-trivial in a production environment. In this case, all legal AP238 CC1 structures must be fully implemented.

If you feel that any of these limitations are significantly adverse to the integrity of this demonstration, let me know.

- Units
    - All linear units: inches
    - All linear feedrates: inches per minute
    - All angular velocities: degrees per minute

- Tool orientation
    - All definitions of tool orientation (*its_toolaxis*) shall be defined as a unit vector
- Feedrates
    - Feedrates are attached to individual toolpaths as a constant via *its_technology* and *feedrate*. This means that a new toolpath must be created any time a feedrate is altered.
    - Rapid feedrates are also attached to individual toolpaths via *its_speed, toolpath_speedprofile, and speed_name*

- Machining Functions
    - The following machining functions are allowed:
        - Coolant On
        - Coolant Off
    - These machining functions are attached to the *machining_operation*

- Tool Change
  Tool changes are machine-dependent operations which are addressed in a machine-independent manner in AP238. The execution of the tool change are the responsibility of the CNC machine tool. The AP238 file is responsible for moving the tool to a safe point, where a retract along the tool axis will not cause a collision. The tool change function will:
        - Retract along the tool axis to a safe point
        - Turn off coolant and spindle
        - Safely traverse to the tool change position
        - Change to the new tool
        - Compensate for any change in tool length
        - Turn on spindle and coolant as required
        - Safely traverse to the safe point

- Extend the tool along the tool axis to the original starting point

- Retract Plane
  - Not Supported

- Spindle Rotation
  - Clockwise only

- Tool Data
  - The tool data is attached to the machining_operation via *its_tool*. No tool data is required other than a label representing the tool number as an integer.